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NSTC GREAT LAKES, IL
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LETTER REGARDING RESULTS FROM FIRST ROUND OF SAMPLING FROM REMEDIAL
INVESTIGATION VERIFICATION STEP WORK PLAN NSTC GREAT LAKES IL
2/20/1989
U S NAVY

April 12, 1989

Subj: Results from first round of sampling from Remedial Investigation Verification Step Work Plan for NTC Great Lakes

The following information was extracted verbatim from two letters from Dames & Moore to Sherry Van Duyn dated February 20, and 22, 1989.

PRELIMINARY EVALUATION OF CHEMICAL ANALYSIS RESULTS

Site 1 - Golf Course Landfill

Ground water appears to be free of contamination

Surface water appears similarly free of contamination, with the exception of chloride and oil and grease, which may result from surface activities (road deicing, vehicular activity).

Site 4 - Fire Fighting Training Area

The occurrence of oil and grease in ground water is anomalous, because no oil and grease were found in overlying site soils and oil and grease was found in the background well. This could mean that the source of this contamination is upgradient of Site 4. Such sources may include upgradient spills or leaking underground storage tanks.

Although not unexpected, surface waters in the ponds contain oil and grease, as well as some volatile and semivolatile organic compounds.

Site soils contain a variety of contaminants, as would be expected from their obviously degraded condition. Lead levels are elevated at various locations, but are not extremely high and could be reflective of natural conditions. Low levels of polynuclear aromatic hydrocarbons in some samples are probably related to the presence of combustion ash from site activities or fill materials. The finding of methylene chloride, acetone, toluene, and bis(2-ethylhexyl)phthalate in several samples is most likely the result of laboratory-introduced contamination (these are the most common lab contaminants), although we do not yet have data from laboratory method blanks to verify this (as of the letters from Feb. 20 and 22).

Site 5 - Transformer Storage "Boneyard"

Site soils contain generally elevated levels of lead and some oil and grease.

PCB contamination appears to be concentrated primarily in the northeast corner of the yard. Some of the highest lead concentrations are also present in this area.

Site 7 - RTC Silk-Screening Shop

Very high concentrations of metals--cadmium, chromium, and lead--are present in site soils and are indicative of site activities.

The presence of methylene chloride, acetone, and toluene is probably the result of laboratory-introduced contamination, as discussed earlier.

Site 12 - Harbor Dredge Spoil Area

A number of pesticides have been detected at low levels throughout the dredge spoils.

Also, elevated concentrations of metals--primarily chromium, copper, lead, nickel, and zinc--have been detected throughout the spoils.

The above findings are not unexpected for lake dredgings and concentrations detected are not extremely high.

Library Searches

For the most part, little or nothing was found in the volatile organics library searches. Also, little or nothing was found in semivolatile organics library searches, with the exception of Site 4 - Fire Fighting Training Area. The Site 4 soils and surface waters in the ponds appear to contain a number of semivolatiles, including a number of alkanes indicative of hydrocarbon fuel usage. This is not unexpected at a site of this type. It is interesting to note, however, that few library search compounds were detected in the Site 4 wells, in spite of the finding of oil and grease in these wells. The second round of groundwater sampling will assist in confirming the presence or absence of this contamination.

Preliminary Recommendations

It is recommended that the second round of ground water and surface water sampling be conducted as planned. This will assist in confirming the presence or absence of contamination as noted from first round results. The second round of sampling was completed the last week in March.

Based on the preliminary evaluation of results it appears that the following sites may require additional investigation and/or remediation:

- Site 4 - Fire Fighting Training Area
- Site 5 - Transformer Storage "Boneyard"
- Site 7 - RTC Silk-Screening Shop.

Missed Holding Times

Due to a laboratory problem, holding times were missed for 26 Site 12 soil samples to be analyzed for pesticides/PCB's. These samples are:

BO12-CZ	BO12-9C	BO12-12C
-7A	-10A	-13A
-7B	-10B	-13B
-7C	-10C	-13C
-8A	-11A	-14A
-8B	-11B	-14B
-8C	-11C	-14C
-9A	-12A	-14CZ
-9B	-12B	

In addition, holding times were also missed for six Site 4 soil samples to be analyzed for oil and grease, volatile organics, and semivolatile organics. These samples are:

WB4-2A	WB-3B
-2B	-4A
-3A	-4B

These samples were scheduled to be recollected during the second round of groundwater sampling at the end of March. Also, sample BO5-9A was to be recollected and analyzed for PCBs at that time. It is also possible that the holding time for mercury may have been exceeded for samples MW4-1, SW1-1, SW1-1X, and SW1-2. These samples also were among those scheduled for resampling at the end of March.

See the attached listing of samples and analytical parameters and sampling locations for each of the sites.

ATTACHMENT A

Listing of Samples and Analytical Parameters
RI Verification Step at NTC Great Lakes, Illinois

NTCGL Samples/Parameters

124189/KLF
3 FEB 89

Parameters

PP
MERPB AG Cr Cl
1/5

Sample ID VOCs BAs TOC Ofg PCBs Pest Cc

MU1-1

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-2

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-3

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-4A

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-5

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-6A

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-7B

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-8

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-9

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-9Z

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

SW1-1

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-1X

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-2

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

DW-1

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

WB4-2A

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-2B

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-3A

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-3B

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-4A

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-4B

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

MU4-1

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-2

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-3

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-4

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-4Z

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

SW4-1

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-1X

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-2

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-3

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-4

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-4

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-4

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-4

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-4

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

-4

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

TRIP BLANK 12-1

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

12-2

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

12-14

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

12-7

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

12-9

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

Note: 2 DENIED

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NTCGL SAMPLES/PARAMETERS

124189/RLF

3 FEB 89

2/5

SAMPLE ID	PARAMETERS							PP			
	VOCs	BHAs	TOC	OTG	PCBs	TEST	CL	MAT	Pb	Ag	Cr Cd
B04-1A	✓	✓		✓					✓		
-1AX	✓	✓		✓					✓		
-1B	✓	✓		✓					✓		
-2A	✓	✓		✓					✓		
-2B	✓	✓		✓					✓		
-3A	✓	✓		✓					✓		
-3B	✓	✓		✓					✓		
-4A	✓	✓		✓					✓		
-4B	✓	✓		✓					✓		
-5A	✓	✓		✓					✓		
-5B	✓	✓		✓					✓		
-6A	✓	✓		✓					✓		
-6B	✓	✓		✓					✓		
-6BZ	✓	✓		✓					✓		
-7A	✓	✓		✓					✓		
-7B	✓	✓		✓					✓		
-8A	✓	✓		✓					✓		
-8B	✓	✓		✓					✓		
-9A	✓	✓		✓					✓		
-9B	✓	✓		✓					✓		

NOTE: Z DENOTES RINSEATE BLANK

X REPRODUCED AT GOVERNMENT EXPENSE

NTCGL SAMPLES/PARAMETERS

124189/RLF

3 FEB 89

3/5

SAMPLE ID	PARAMETERS							PP			
	VOCs	BHAs	TOC	OTG	PCBs	TEST	CL	MAT	Pb	Ag	Cr Cd
B05-1				✓	✓						✓
-1A				✓	✓						✓
-1AX				✓	✓						✓
-2				✓	✓						✓
-3				✓	✓						✓
-3A				✓	✓						✓
-3AX				✓	✓						✓
-4				✓	✓						✓
-5				✓	✓						✓
-5A				✓	✓						✓
-6				✓	✓						✓
-7				✓	✓						✓
-8				✓	✓						✓
-9				✓	✓						✓
-9A				✓	✓						✓
-10				✓	✓						✓
-10A				✓	✓						✓
-10AZ				✓	✓						✓
-11				✓	✓						✓
-12				✓	✓						✓
-13				✓	✓						✓
-13Z				✓	✓						✓
-14				✓	✓						✓
-15				✓	✓						✓
-16				✓	✓						✓
-17				✓	✓						✓
-18				✓	✓						✓
-19				✓	✓						✓
-20				✓	✓						✓
-21				✓	✓						✓
-22				✓	✓						✓
-23				✓	✓						✓
-24				✓	✓						✓
-25				✓	✓						✓
-26				✓	✓						✓
-27				✓	✓						✓

NOTE: Z DENOTES RINSEATE BLANK

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3 FEB 89

4/5

SAMPLE ID	PARAMETERS					TEST	CL	PP				
	VOCs	BNA's	TOC	OTG	PCBs			Mat	Pb	Hg	Cr	Cd
B07-1A	✓								✓	✓	✓	✓
-1B	✓								✓	✓	✓	✓
-2A	✓								✓	✓	✓	✓
-2B	✓								✓	✓	✓	✓
-3A	✓								✓	✓	✓	✓
-3AX	✓								✓	✓	✓	✓
-3B	✓								✓	✓	✓	✓
-3BZ	✓								✓	✓	✓	✓
B012-1A	✓				✓	✓		✓				
-1B	✓				✓	✓		✓				
-1C	✓				✓	✓		✓				
-2A	✓				✓	✓		✓				
-2B	✓				✓	✓		✓				
-2C	✓				✓	✓		✓				
-3A	✓				✓	✓		✓				
-3AX	✓				✓	✓		✓				
-3B	✓				✓	✓		✓				
-3C	✓				✓	✓		✓				
-4A	✓				✓	✓		✓				
-4B	✓				✓	✓		✓				
-4C	✓				✓	✓		✓				
-5A	✓				✓	✓		✓				
-5AX	✓				✓	✓		✓				
-5B	✓				✓	✓		✓				
-5C	✓				✓	✓		✓				
-6A	✓				✓	✓		✓				
-6B	✓				✓	✓		✓				
-6C	✓				✓	✓		✓				
-6CZ	✓				✓	✓		✓				
-7A	✓				✓	✓		✓				
-7B	✓				✓	✓		✓				
-7C	✓				✓	✓		✓				

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X DENOTES

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NTCGL SAMPLES/PARAMETERS

124-189/RLF

3 FEB 89

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PARAMETERS

SAMPLE ID	VOCs	BHAs	TOC	OTG	PCBs	TEST	CL	PP	MAT	Pb	Ag	Cr	Cd
BO12-8A	✓				✓	✓		✓					
-8B	✓				✓	✓		✓					
-8C	✓				✓	✓		✓					
-9A	✓				✓	✓		✓					
-9B	✓				✓	✓		✓					
-9C	✓				✓	✓		✓					
-10A	✓				✓	✓		✓					
-10B	✓				✓	✓		✓					
-10C	✓				✓	✓		✓					
-11A	✓				✓	✓		✓					
-11B	✓				✓	✓		✓					
-11C	✓				✓	✓		✓					
-12A	✓				✓	✓		✓					
-12B	✓				✓	✓		✓					
-12C	✓				✓	✓		✓					
-13A	✓				✓	✓		✓					
-13B	✓				✓	✓		✓					
-13C	✓				✓	✓		✓					
-14A	✓				✓	✓		✓					
-14B	✓				✓	✓		✓					
-14C	✓				✓	✓		✓					
-14CZ	✓				✓	✓		✓					

NOTE: Z DENOTES RINSEATE BLANK

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ATTACHMENT B

Site Maps Showing Sampling Locations
RI Verification Step at NTC Great Lakes, Illinois

(b) (3) (A)



(b) (3) (A)



(b) (3) (A)



(b) (3) (A)



(b) (3) (A)

